APPLICATION SHEETS

The Application Sheets are used to gather the appropriate administrative information to process the OES-PSC-311. These sheets must be completed, signed, and accompanied with the Technical Data Sheets.

Applicant:

_____
(organization name)

_____
(address)

_____
(city, state, zip)

_____
(telephone number)

_____
(email address)

In accordance with the attached Technical Data Sheet(s), the application is hereby made to:

- ◯ Establish New Lease
- ◯ Modify Lease - describe specific changes below
- ◯ Renew lease - with modification as stated below
- ◯ Renew lease (no changes, technical sheets must be completed)
- ◯ Lease square feet _____

Description of modification	

For vault space and related antenna space at: _____
(site name)

Power requirements for operations of communications equipment are:

- ☐ Commercial and emergency power
- ☐ Commercial power only
- ☐ No power required

NOTE: Some radio vault facilities provide commercial and emergency power to each rack space without exception, and the tenant will be charged accordingly

Person responsible for lease negotiations and submission of this application:

Name _____

Address _____

City, State, and Zip _____

Telephone Number _____

Email Address _____

Billing Information:

Name _____

Address _____

City, State, and Zip _____

Telephone Number _____

Email Address _____

It is understood that if any subsequent on-site testing is required, it will be charged to the lessee at the current rate determined by the State. In addition, any required engineering or technician labor charges or parts procurement expenses, plus a program management fee, will be re-billed to the lessee at the current rates being charged by the State. Prior to these charges being incurred, a written estimate and acceptance document will be forwarded to the applicant for review and signature.

Applicant: _____

By: _____

Title: _____

Date: _____

Receipt of a non-refundable application fee in the amount of $ _____ is hereby acknowledged.

STATE OF CALIFORNIA _____

By: _____

Date: _____

NOTE: A fee will be required when this agreement is renewed for a new term or when changes are made to an existing agreement and the preparation of a new lease agreement is required.

TECHNICAL DATA SHEETS

Data submitted on the Technical Data Sheets is used by the PSC engineers to perform a study to determine the impact of the application on the existing users at the site. Please complete these sheets in its entirety and provide required information. Existing tenants must reflect the tenants installed equipment and equipment changes (new installations, removals, etc.).

Site Name: _____

County: _____

Date: _____

The following technical data is submitted in conjunction with a request for vault space.

If this is a land lease application for Cellular, applicant must provide plot plans, construction drawings and a written description of proposed land use.

Person responsible for technical operation of this station (person who can provide technical details):

Name _____

Address _____

City, State, and Zip _____

Telephone Number _____

Email Address _____

Date equipment desired to be in operation: _____

(It should be noted that, due to engineering priorities, this application may require up to one (1) full year to process.)

Equipment is to operate in the Radio Service: _____

FCC call sign of this installation: _____

(Include a copy of the FCC license)

Type of operation:

☐ Base Station ☐ Mobile Relay ☐ Microwave Station ☐ Other _____

Existing and additional rack space to be leased (in 1/3 rack increments): _____

(NOTE: Unless otherwise authorized, all electronic equipment is to be mounted in 7'6" aluminum open-frame relay racks and fastened to the site's earthquake bracing and cable ladder system. One rack occupies 2' by 2' of floor space.)

Additional space desired to mount cavities, duplexers, batteries, etc.:

☐ Wall Space ☐ Rack Space ☐ Floor Space (HxWxD, inches) _____

☐ Additional space not required

Space for battery facilities required, if any, including charger:

☐ Wall Space ☐ Radio Rack ☐ Floor Space (HxWxD, inches) _____

☐ Not required

Maximum power consumption: TRANSMIT Watts: _____ RECEIVE Watts: _____

Voltage:

☐ 110 Volts AC ☐ 12 Volts DC ☐ 48 Volts DC ☐ Other _____

EQUIPMENT DATA

New Tenant: Provide data for each piece of equipment to be installed in each vault space and identify as **New (N).**

Existing Tenant: Provide data for each piece of equipment currently installed and identify as **Existing (E).** If adding or removing equipment; identify the appropriate action **New (N)**, **Removing (R)**.

FREQUENCY INFORMATION: **CELLULAR APPLICANTS MUST PROVIDE SPECIFIC CHANNELS TO BE USED (NOT THE BAND). IF SPECIFIC FREQUENCIES HAVE NOT BEEN PROVIDED THE APPLICATION WILL BE RETURNED.**

Be sure to include a system block diagram on the page furnished for that purpose. Duplicate this page as required to show all equipment desired to be installed, both existing and proposed:

TRANSMITTER #1 Power Output (W) _____

Frequency(s)

_____

◯ Existing ◯ Removing ◯ New

Make and Model

_____

RECEIVER #1 Power Output (W) _____

Frequency(s)

_____

◯ Existing ◯ Removing ◯ New

Make and Model

_____

TRANSMITTER #2 Power Output (W) _____

Frequency(s)

_____

◯ Existing ◯ Removing ◯ New

Make and Model

_____

RECEIVER #2 Power Output (W) _____

Frequency(s)

◯Existing ◯Removing ◯New

Make and Model

TRANSMITTER #3 Power Output (W) _____

Frequency(s)

◯Existing ◯Removing ◯New

Make and Model

RECEIVER #3 Power Output (W) _____

Frequency(s)

◯Existing ◯Removing ◯New

Make and Model

TRANSMITTER #4 Power Output (W) _____

Frequency(s)

◯Existing ◯Removing ◯New

Make and Model

RECEIVER #4 Power Output (W) _____

Frequency(s)

◯Existing ◯Removing ◯New

Make and Model

ANTENNA DATA

New Tenant: Provide data for each antenna to be installed at this vault facility and identify as **New (N).**

Existing Tenant: Provide data for each antenna currently installed and identify as **Existing (E).** If adding or removing an antenna; identify the appropriate action **New (N)**, **Removing (R)**.

Antenna Number	Make and Model	Length or M/W dish size	Gain (dBd) (dBi for M/W)	Azimuth (relative to true north)	*Height desired (feet)	Existing (E) Removing (R) New (N)
1						
2						
3						
4						
5						
6						
7						

***** For VHF antennas, show desired height to base of antenna support. For microwave dishes, show desired height to center of radiating element.

AUXILIARY EQUIPMENT DATA

For each transmitter, receiver, or combination, supply the following:

Make and model of cavity(s), filter(s), isolator(s), duplexer(s), etc., desired to be installed at this site. Please indicate the desired location where these items are to be mounted in the vault. Be sure to include these elements on the system block diagram on the page provided for that purpose.

SYSTEM BLOCK DIAGRAM:

Please provide a block diagram of the proposed installation at this radio vault facility. Be sure to include all elements of the system, including transmitters, receivers, power sources, antennas, protective devices, telephone lines, multiplex circuits, etc. Use additional sheets if necessary. Refer to the attached example if desired. Please be sure to label the operating frequency of each piece of equipment in the system, as appropriate.

Insert block diagram

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GENERAL INFORMATION

The State of California operates telecommunications facilities at numerous mountaintop locations throughout the State. These facilities were developed for use by State agencies requiring radio communications.

Space at these facilities is made available to other than State of California users when it is surplus to the State's requirements. As the space is limited, State of California agencies are always given first priority. Non-state applicants will be considered in the following order:

1. Federal government agencies
2. Local government agencies
3. Public utilities
4. Private sector entities

In making space available, the State of California attempts to recover its operating, maintenance, and management costs. Users are not guaranteed that State facilities will be accessible or operable at all times. Leases are generally issued for five-year periods; in some circumstances, the lease period may vary. Leases will be considered for renewal at the end of their term, subject to the space requirements of the State of California.

When requesting vault, tower, and/or ground space at a State-controlled sitan, an OES-PSC-311, Radio Vault Space Application (Non-State Users) must be completed. All applications submitted must include the non-refundable administrative application fee and technical analysis fee. The non-refundable administrative application fee is $_____. The non-refundable technical analysis fee is $_____ . Application and fees are to be sent to the State agency controlling the vault.

(i.e. The California Department of Transportation, the California Highway Patrol, or the Cal OES - Governor's Office of Emergency Services (OES).)

Contact the appropriate State agency for specific details regarding their vault rates and leasing process. If it is unknown which State agency controls a specific site, call (916) 894-5073.

NOTE: When applying for the California Department of Forestry and Fire Protection controlled site, use a CDF Radio Vault Space Application, Non-State Users, OES-PSC-312.

The State must review, manage and engineer any proposed installations. Once a new, renewal, or modification OES-PSC-311 application has been received by a State agency and is reviewed administratively, it is forwarded to the Cal OES - Governor's Office of Emergency Services, Public Safety Communications (PSC) for technical analysis. A study will be performed to determine the impact of the application on the existing users at the site. Based on the study, the technical analysis will include specific recommendations to the controlling State agency. If serious technical difficulties are found, OES-PSC will recommend to the State agency to cancel the OES-PSC-311 application. In cooperation with the applicant, the State will attempt to meet all users' operational requirements.

Any subsequent labor time or material costs required for site engineering, antenna or combining system upgrades, or technician labor will be borne by the applicant at the OES-PSC current rates. Applicants will be notified by the Department of General Services (DGS), Real Estate Service Division (RESD) of the amount due prior to occupancy of the vault. No further processing of the application will take place until written approval of these expenses, as well as a commitment to pay, is received from the applicant by RESD. **NOTE:** Modification of site-master antenna or combining systems may NOT be done by a tenant.

Such modifications must be designed by OES-PSC engineering and installed by OES-PSC approved technician resources.

NOTE: The addition or deletion of any transmitting or receiving frequencies, antennas, or equipment is considered a modification and requires the submitting of a OES-PSC-311 application, the non-refundable administrative and technical analysis fees to the State agency. (Approval is required by the State agency **prior** to the proposed changes taking place in the facility.)

It shall be understood by all applicants that the State is NOT obligated to upgrade any facility to accommodate any lessee. Any improvement required prior to the entry shall be the sole financial responsibility of the lessee. The lessee shall be notified in writing of the upgrades required to accommodate their installation, and payment for these upgrades must be arranged prior to the installation of any such equipment. Any said improvements, including the installation or modification of site-master antenna, combining, or power systems, shall remain the property of the State agency unless otherwise stipulated in the lease. NOTE: This excludes the actual radio transmitting and receiving equipment, as well as individual antennas installed for the sole use of the lessee and not part of a master-site arrangement.

The OES-PSC-311/312 application consists of "Application" sheets and "Technical Data" sheets. Please complete, sign, and return the Application and Technical Data sheets to make a formal application. Please note for **New Applicants** that the information on the "Technical Data Sheets" shall reflect what the applicant desires to install at the facility. For **Existing Tenants**, that the information on the "Technical Data Sheets" shall reflect the tenants installed equipment and equipment changes (new installations, removals, etc.). Upon completion of the engineering analysis of the application, the tenant's actual installation requirements may require some design changes to ensure the integrity of the State's telecommunications operational requirements. This required design criteria will be outlined in writing and incorporated as a condition of the lease agreement.

All requested information must be supplied to have this application processed. Failure to do so will result in the application being returned for resubmission, complete with an additional non-refundable application fee. Processing time will also be delayed accordingly.

Please attach separate sheets for any remarks or special comments required.

TECHNICAL REQUIREMENTS FOR STATE-CONTROLLED SITES

The following are the maximum radio frequency power outputs for radio equipment in State-controlled facilities:

RADIO SERVICE	FREQUENCY RANGE	MAXIMUM TRANSMITTER POWER OUTPUT TO ANTENNA
FM Broadcast	88-108 MHz	1000 watts
Television Broadcast	54-72 MHz, 76-88 MHz, 174-216 MHz, 470-698 MHz	500 watts
AM Broadcast	535-1705 kHz	10 watts
VHF Low Band	28-54 MHz	120 watts
VHF Mid Band	72-76 MHz	50 watts
VHF High Band and UHF	136-512 MHz	150 watts
700/800/900 Band	698-952 MHz	125 watts
Point to Point Microwave	952-960 MHz	20 watts
Point to Point Microwave	1700-2600 MHz	10 watts
Licensed wireless and mobile telephone	1805-2690 MHz	50 watts
Point to Point Microwave	2.6-40 GHz	3 watts

The following additional standards must be adhered to for any installation at a State-controlled site:

1. A copy of the FCC license or NTIA authorization, or an approved and completed "FCC ID tag", along with the name and phone number of the person responsible must be posted on each transmitter.
2. Control stations and "inverted pairs" on FCC-designated repeater channels will generally not be allowed at a site.
3. Only transmitters authorized by the FCC for that service, designed for use in a high-RF, multi-user environment will be allowed to be installed at a site. All equipment shall be installed and operated in accordance with the site lessor's authorization and approval.
4. Transmitters and receivers will be combined and/or multi-coupled to the maximum extent possible, consistent with the specific system performance requirements of the lessee. A one-time "site assessment" cost may be incurred.
5. All systems NOT connected to the lessor's combining network must be installed to comply with site standards, require lessor's prior engineering approval and meet the following minimum requirements:

a) Each transmitter shall have a protective isolator, harmonic filter, and band-pass cavity (BPC) which meets the minimum attenuation levels listed in Table I. The isolator and harmonic filter shall precede the BPC in the transmit path;

b) Pass/Reject or notch-type duplexers must include a BPC meeting the requirements in Table I in the transmit leg prior to the duplexer input port;

c) Additional filters, BPC's, isolators and other hardware may be required at the lessee's expense to correct site problems as a result of the lessee's installation;

d) RF cabling between pieces of equipment within a rack shall be of double-shielded or solid outer conductor variety, such as RG-214, RG-142 or RG-400 cables. NOTE: In general, cabling supplied within a manufacturer's piece of equipment is sufficient to meet this requirement. In some circumstances, however, it may become necessary to modify the equipment to meet the special needs of the site;

e) RF cabling between racks of equipment in a vault, including cables to and from combining equipment and antenna feed-through ports, shall be of the solid outer conductor variety. In general, all receive lines within the vault shall be 1/4" or 1/2" diameter, such as Andrew FSJ1-50B, FSJ4-50B or equivalent; all transmit lines within the vault shall be 1/2" diameter, such as Andrew FSJ4-50B or equivalent. All feedlines outside the vault, such as between the antenna pigtail and the lightning arrestor plate, shall be at least 1/2" diameter solid-shield cable equivalent to Andrews LDF4-50A HELIAX;

f) RF connectors on transmit cables shall be Type "N" wherever possible unless the particular piece of manufacturer's equipment has another type of connector installed. RF connectors on receive cables MAY be Type "BNC", although Type "N" is highly recommended. Again, if the manufacturer's equipment has another type of connector installed, this type of connector is acceptable for that junction;

g) Tiewraps designed for external use, such as the Panduit "76" series TEFZEL cable tie, or another insulated clamp or strap shall be used to secure transmission lines to towers and/or cable ladders. Rubber "donut"-type hangers such as those manufactured by Microflect are also acceptable to be used to secure transmission lines. **Metal clamps, "wraplock", "Band-It" ties, or similar metal strapping for attaching feedlines to a mounting structure is prohibited at State facilities.** If the facility has a wood-pole structure for mounting antennas, the use of utility pipe clamps or conduit clamps is permitted for fastening the feedline to the structure;

h) State telecommunications facilities are generally designed to accommodate equipment housed in 7'6" tall open frame relay racks, such as the Chatsworth model 46050-505 rack. Racks shall be fastened to the floor with an approved anchor, and connected to an overhead cable tray via an approved method, such as via a length of Chatsworth 11450-001 framing channel and using "J-bolt" kits. A rack elevation diagram is attached to illustrate how equipment will be housed in the 7'6" rack. Complete/return this diagram with the application form;

i) Most State telecommunications sites have extensive lightning and surge protection systems installed, including lightning arrestor mounting panels. All transmission lines must enter and exit the vault via one of these entry panels using the approved method outlined in the technical requirements of the lease document;

j) All equipment installed in a State telecommunication site must be connected to the site's ground system. Generally, a ground pigtail will be supplied in the cable tray above the equipment rack. All connections to the ground system must be made via compression fittings or bolted joints. "Split-bolt" connectors are unacceptable as junctions;

k) All antenna mounts shall be hot-dip-galvanized, and all mounting hardware shall be either hot-dip-galvanized or stainless-steel. Electro-galvanized or plated material for mounting of antennas is not permissible. The use of aluminum for mounting cross-arms or cross-over plates is allowed. At sites where wood pole structures are used, it is not permitted to drill holes through the poles to mount antennas or cross-arms. The only acceptable method of mounting an antenna to such a structure is via a "collar" that clamps around the entire circumference of the pole, sandwiching the pole inside. Such a collar must also be hot-dip-galvanized in construction and use galvanized or stainless-steel hardware.

TABLE ONE

FREQUENCY BAND	ISOLATOR REVERSE ISOLATION	BPC ATTENUATION AT FREQUENCY FROM CARRIER
28-54 MHz	15 dB	20 dB at ± 600 kHz
72-76 MHz	25 dB	20 dB at ± 600 kHz
136-174 MHz	25 dB	30 dB at ± 2 MHz
406-512 MHz	25 dB	15 dB at ± 2 MHz
698-960 MHz	25 dB	20 dB at ± 10 MHz